

craftsmanship is analogous to the correspondence between significance and integrity. It is only in reference to each other that the full potential and meaning of each can be realized.

#### Notes

- <sup>1</sup> Orin M. Bullock, Jr. *The Restoration Manual*. (Norwalk, Connecticut, Silvermine Publishers Inc., 1966) pp. 3-4.
- <sup>2</sup> Charles E. Peterson, "The Role of the Architect in Historical Restorations." *Preservation and Conservation: Principles and Practices*. Sharon Timmons ed. (Washington, DC, The Preservation Press, 1976) p. 5.
- <sup>3</sup> Stephen W. Jacobs, A.I.A. "The Education of Architectural Preservation Specialists in the United States." *Preservation and Conservation: Principles and Practices*, Sharon Timmons, ed. (Washington DC, The Preservation Press, 1976) pp. 460-477.
- <sup>4</sup> Federal Register: June 20, 1997 (Volume 62, Number 119). From the Federal Register Online via GPO Access [wais.access.gpo.gov].
- <sup>5</sup> U.S. Congress, Office of Technology Assessment, Technologies for Prehistoric and Historic Preservation, OTA-E-319 (Washington, DC: U.S. Government Printing Office, September, 1986.) p. 153.
- <sup>6</sup> Michael J. Crosbie. "The Schools: How They're Failing the Profession," *Progressive Architecture*. (Penton Publishing, September, 1995) pp. 47-51, 96, & 97.
- <sup>7</sup> Michael J. Crosbie. "Why Can't Johnny Size A Beam?" *Progressive Architecture*. (Penton Publishing, June, 1995) p. 94.
- <sup>8</sup> Pye, David. *The Nature and Art of Workmanship*, (Cambridge University Press, 1968.) p. 1-2.
- <sup>9</sup> Ibid. p. 4.
- <sup>10</sup> Hugh C. Miller. "The Education of Historical Architects and a Second Look at the NPS's Skills Development Plan". (APT Bulletin, Vol. XXVIII, No. 1-2, 1996) p. 32-34.

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Richard L. Hayes

# Empowering the Craftsperson

## Mantra: Inspect/Repair/Replace

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**I**n the current fiscal climate there needs to be increased efficiency in the performance of maintenance and repair activities for historic buildings.

Progressive historic building maintenance is necessary to extend the useful life of buildings and conserve materials. Currently, the procedures entail a inspect, specify work, issue repair order, verify work. A method to achieve pliable maintenance is by empowering the trades- and craftspeople to perform inspections and immediately repair or maintain component. There are two concepts to the empowerment effort. The concepts can be termed toolbelt and free-range. Numerous other terms could be applied to the concepts. Basic to each approach, regardless of terms, is an underlying philosophy of inspection and concurrent repair. Neither one of these options is currently practiced as outlined below; they are offered as propositions for evaluations of current practices.

The first inspect and repair scenario does not require a truck load of tools and materials—the trust is that while an employee is at a building,

they repair minor deficiencies discovered in the performance of other tasks. These repairs are on a scale where a well-equipped toolbelt and judgment to execute suffice. Initially the person(s) could be on site to do a building condition assessment or some other task associated with a building. The notion is that there is a scale of repairs and maintenance items which take small effort to do while at the site—instead of returning at a future date. Frequently, small problems left unattended make for future major headaches. An example would be a team (person) being sent to do a building condition assessment. While on site the trades- and craftsperson would be empowered to repair or maintain minor items as they are found. For instance, in the above example during the course of inspecting gutters, they are found to be loose and full of debris. The inspector would have the latitude to take the extra time to secure and clean the gutters. Another example would be the repairing of a sash cord during a window inspection. This inspect and repair approach saves time by cutting out return trips to a building.

The second approach is a free-range. This concept is that specific disciplines would be allowed to do needed repairs or maintenance work from a set of authorized undertakings. There are two methods to determine items to be authorized. One method is to review work order backlogs. In the backlog instance, are there particular repairs or maintenance tasks which have piled up. The backlog can be grouped by type, severity, or discipline. The most critical tasks, as determined by the trades- and craftspeople, would be taken care of first. An other selection method is cyclical. Certain repairs or maintenance items are seasonal by their nature. To continue the gutter illustration, the fall season would focus on cleaning and the early spring for gutter attachments. The key is for the workers to have input into which tasks should be done cyclical. In either approach—critical or cyclical—the proposal is to let the trades- and craftspeople participate in the assessment process and have a free-range to perform the evaluated tasks.

Obviously there has to be some management guidance to help with time control. Several control methods are feasible. One would be to have a time limit on the spontaneous toolbelt maintenance and repair items. The limit would have to depend on the size and complexity of the building(s). In terms of the work day any repair taking less than an hour would be reasonable for a single minor repair or maintenance task. To avoid time-creep there would additionally be a total time allocation of either toolbelt or free-range repairs per building. The trades- and craftspeople would have the power to determine which repair would be the most valuable to have done.

A set of standard performance-based specifications for repair work of the toolbelt and free-range variety would need to be developed. The size of the organization's physical plant under consideration will warrant different degrees of textual and technical guidance. Currently a typical event sequence is inspect/specify/repair order. The intent of the performance-based specifications is to combine the specification and

repair order step. Thus, the event sequence becomes inspect/repair. By combining the two steps, the time-lag between inspect and repair is cut down considerably. The efficiency results not only in time—but that also the repair needed to be done most closely resembles the discovered repair item.

Please keep in mind that the scale of tasks addressed with this initiative is not major construction. The focus is on materials and systems that are in place and serviceable condition. The specifications mentioned above need to be developed with the participation of the trades- and craftspeople. Vocabulary and personal intuition information are key to the success of these guidance documents. Thus, not only do the trades- and craftspeople have a foreknowledge of the performance level expected, they have a vested interest in the process where their efforts are key.

It should be pointed out that the toolbelt and free-range approach is a natural situation to have a junior person shadow the lead person performing the work. By starting a person on the path to using judgment as to when to take the initiative to go beyond the blinders of a work order, a next generation is being prepared to steward our historic properties.

The inspect and repair concepts of toolbelt and free-range can be tailored for a specific organization's building(s). Personnel performance standards for tradespeople doing the types of work need to be tailored concurrently. These standards establish a minimum set of criteria for a person performing the work. Additionally, this allows for credit to be given upon successful execution of the inspect and repair duties. In the spirit of paper work reduction, the inspect and repair tasks should be reported in a simple way. A reporting method on the scale of a small card, for example, would need to be developed. This would assist in the initiation of inspect and repair efforts by tracking the small problems. The information on the card should be simple—what, where, and how long. One reason for tracking is to enable the workforce to document their accomplishments; a second reason is for use in predicting trends.

Any effort to change status quo operations are likely to be met with resistance in the form of hard-to-break habits, fear of change, failure to fully anticipate stumbling points or a multitude of other control factors which have to be modified. Below is a suggested strategy to initiate trades and crafts empowerment in property management.

The processes to introduce new aspects of property management needs to be planned, nor can it be done without some effort. For individuals wishing to initiate toolbelt and free-range inspect

*Minor repair deficiencies, such as vegetation growing out of masonry and leaky roof drainage systems, should be accomplished while in the field; either approach, "toolbelt" or "free-range" could perform the required task and contribute to the preservation of the building. Photo courtesy HPTC.*



and repair methods, the following steps are offered as a starting point.

**Assign responsibility for initiating the efforts.** A senior staff member in the facilities management chain may be the first choice. Consider appointing an individual who has familiarity with the day-to-day maintenance and repair activity. An individual from the side of the organization who actually performs the work may actually be best—they are the ones who will be evaluated for performing the work.

**Assemble information on how tasks are currently assigned.** This step should take into account the total process, from the call to inspect to the signing off on repairs.

**Consult with those parties interested in your holdings.** Let organizations know that

question—how many and what kind. There is a danger when you are familiar with a situation. You might leap over an item because you are familiar with it.

**Assess hazards.** Are there materials and/or situations which might cause injury or harm if the workforce is not notified of the existence?

**Express concisely system modifications.** Which standard operating procedures are you changing and what is the envisioned end result?

**Establish management oversight.** This is not to take away from the empowerment effort, but how are these efforts going to be managed and evaluated?

**Print and distribute the plan.** This is not meant to be prescriptive, but rather a simple and flexible expression of the changes and procurement methods.

**Educate the trades- and craftspersons.** How are the changes to be made, what flexibility is offered, what are the sources of support, and how will inspect and repair tasks be evaluated?

**Assess the changes.** Analyze and evaluate how well the care and maintenance has been improved. Above all keep the process current. Tweak and modify as needed—keep the door open to approved time management and response to building users concerns of maintenance and repair issues.

For these inspect and repair approaches—toolbelt and free-range—to become initiated there needs to be support. Management and the labor force need to buy-off on the concept of building custodians versus narrow focus work order dredges. The trades- and craftspersons who work on historic buildings warrant the respect and flexibility the system outlined above offers. For better and

through ill, let the reputations and efforts of an empowered trades and crafts workforce deliver an improved set of maintained and repaired buildings.

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"Basic to each approach is an underlying philosophy of concurrent inspection and repair"

alternative methods are being considered. The State Historic Preservation Officer may have to legally be consulted with. Additionally, be on the lookout for hidden agendas. Some individuals may have an interest in maintaining the systems as is for reasons which are not in the best interest of historic buildings—don't let yourself be told "it is not broken."

**Clearly identify those properties and attributes you will be addressing.** Answer the